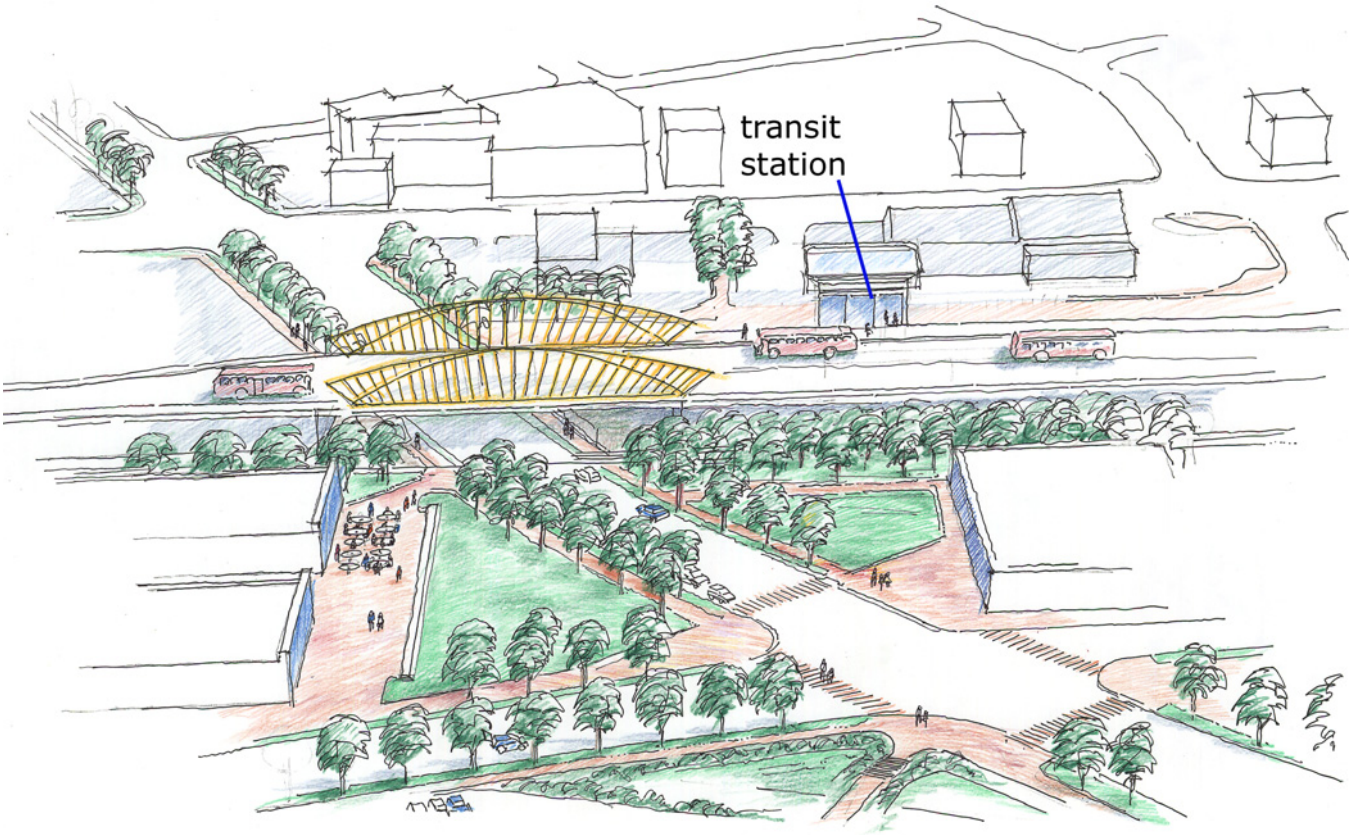
New Britain - Hartford Station Area Planning Project

Flatbush Station Area Plan

July 2004



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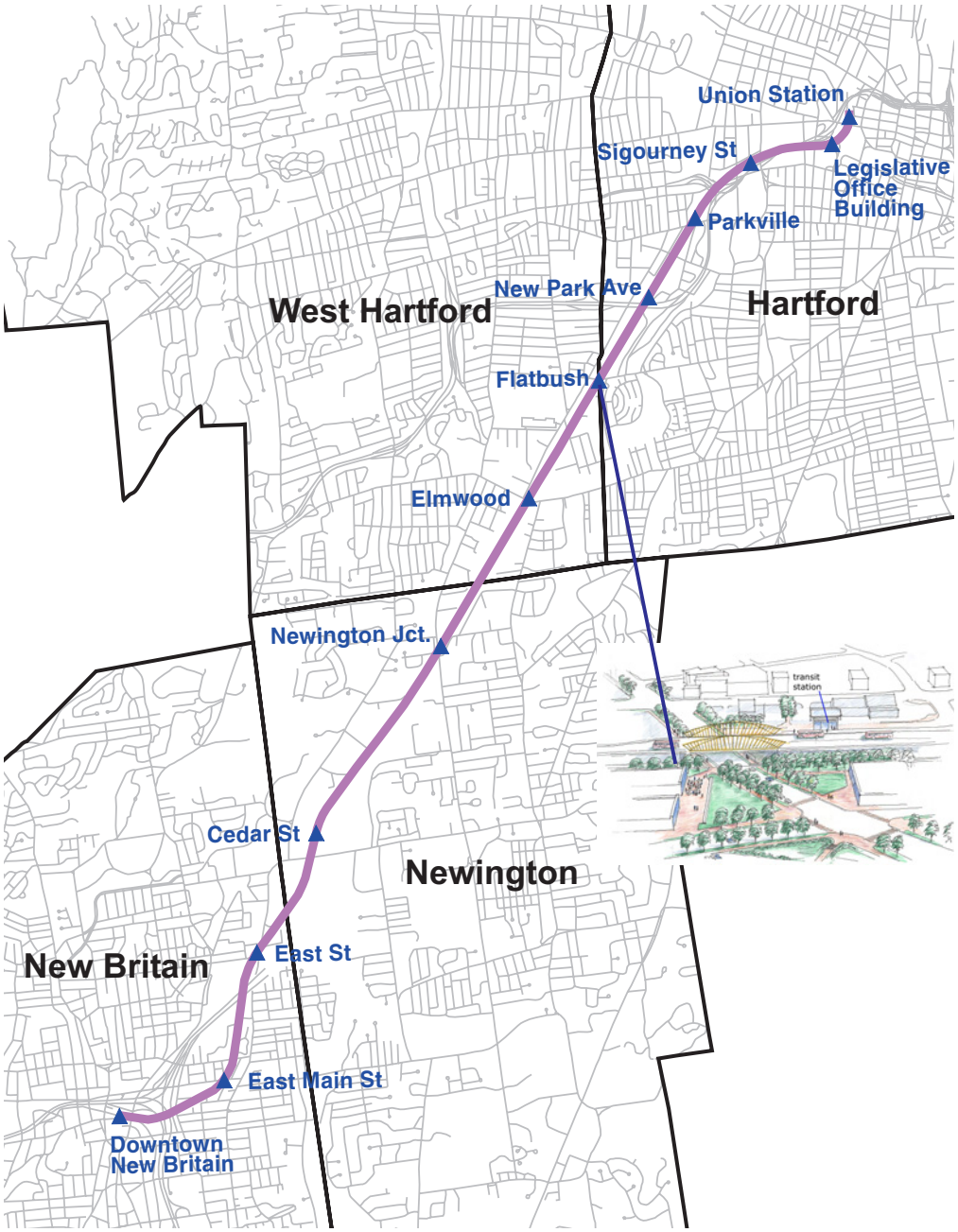

For more information: contact CRCOG at 860-522-2217 or go to CRCOG's or Hartford's websites: www.crcog.org.; www.hartford.gov

Prepared in cooperation with citizens, the Cities of New Britain and Hartford, the Towns of West Hartford and Newington, the Capitol Region Council of Governments, and the Connecticut Department of Transportation. The opinions, findings and conclusion expressed in this publication are those of the respective Municipal Advisory Committees that served on the project and do not necessarily reflect the official views or policies of the Connecticut Department of Transportation and/or the U.S. Department of Transportation.

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This report was prepared with the help of the Hartford and West Hartford Municipal Advisory Committees

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Jackie/Fongemie/Shawn Holloway - Behind the Rocks

The report was accepted by the Hartford MAC on May 20, 2004 with the following language:

The Hartford Municipal Advisory Committee for the New Britain/Hartford Station Area Planning project endorses the Station Area Plans for the Flatbush, Parkville, Sigourney, and Unions Stations as guides for the City of Hartford to refer to when considering projects and policies pertaining to the Stations' environs. City staff should consider these plans when reviewing proposals for infrastructure (e.g. streets) and development in these areas. The Planning and Zoning Commission should incorporate these plans into Hartford's Plan of Conservation and Development. Respective NRZs should adopt these plans as part of their Strategic Plans.

West Hartford Municipal Advisory Committee

Ron Van Winkle, Chairperson - Director of Community Services, Town of West Hartford
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Rob Rowlson - Business Development Officer, Town of West Hartford
Marcia Lewis - Faxon Branch Library
Tim Parola - West Hartford Vision Inc.
Rick Liftig - WH Vision/Elmwood Business Association

The report was accepted by the West Hartford MAC on May 18, 2004 with the following language:

The West Hartford Municipal Advisory Committee for the New Britain/Hartford Station Area Planning project accepts the Flatbush Station Area Plan as a broad guide for Town of West Hartford and planning staff to refer to when considering projects and policies pertaining to the Flatbush Station environs.

Table of Contents

Introduction

The Project

The New Britain-Hartford Busway is a new rapid transit facility being built by the Connecticut Department of Transportation. The exclusive 9.4-mile long busway, linking downtown New Britain with downtown Hartford's Union Station, will run along active and inactive railroad rights-of-way through four cities/towns: New Britain, Newington, West Hartford and Hartford. The Busway was selected as one of ten Federal Transit Administration (FTA) Bus Rapid Transit (BRT) demonstration projects and will be paid for with both federal and state money. Construction on the Busway is scheduled to start in 2006 and services should start by the end of the decade.

This document is the outcome of a complementary effort to the Busway project: the Station Area Planning Project. The primary goal of the Station Area Planning project is to coordinate transportation and land use planning for the areas around proposed station sites in order to enhance the pedestrian environment and development around transit stations and maximize the benefits of the Busway investment. This study is state funded through the Transportation Strategy Board. Conducted by the Capitol Region Council of Governments (CRCOG) together with a consultant team led by the Crosby | Schlessinger | Smallridge, the study has been coordinated with municipal and community leaders in Hartford, West Hartford, Newington, and New Britain to identify underutilized property/development opportunities and develop strategies to create vibrant walkable districts with easy access to regional transit.

In each of the four municipalities, a Municipal Advisory Committee (MAC) was established. The MACs, comprised of municipal staff, members of local boards and commissions, and station area stakeholders, met regularly over the past year to assist in the station area planning process by reviewing progress to date and providing input on local issues and concerns.

Three Public Open Houses were held in Hartford and one in West Hartford to elicit input from a larger audience. The open house in West Hartford introduced the planning project as well as the concept of transit-oriented development[1]. At the

[1] *The West Hartford committee selected a focus on the Flatbush station rather than the Elmwood station. Because of the long redevelopment horizon around the Flatbush station, it was premature to hold additional open houses at this time.*

first Hartford open house, the concept of transit oriented development was explained, and the initial assessment of each of the twelve station areas was presented, along with the reasons for the selection of six station areas for further study. At the second open house, the Design Principles for the six Hartford station areas were presented, along with early concepts for the four Hartford station areas selected for more detailed planning. The detailed plans shown in this document were presented at the third open house.

What is Transit Oriented Development and The Case for Density

Transit experts assert that success for a transitway depends on many factors, of which one is planning for and bringing about appropriate and coordinated development. Appropriate means a mix of development—housing, commercial, office—and a relatively high level of density. The other key factors include provision of an attractive, safe and inviting pedestrian environment, and the use of public space integrated with the transit station and commercial space to create a "sense of place." This type of transit-supportive development is often called Transit-Oriented Development or TOD.

The development in Canada, Australia and Latin America suggests that BRT investments, like rail transit, can have substantial market impacts. The number of BRT systems in the United States is modest compared to heavy rail, commuter rail and light rail systems, but recent surveys have shown that significant mixed-use development is occurring in the Pittsburgh West Busway and Boston Silver Line Phase II Busway corridors.

TOD districts are usually defined as the ¼ to ½ mile radius around a station, approximately a comfortable five to ten minute walking distance.

Successful transit-oriented development requires that development occur at densities that encourage pedestrian activity and support transit. Starting at densities of 12 dwelling units per acre, research shows that dependence on the automobile begins to decline and the use of transit increases. At 16 units per acre, these trends become significant.[1] Decision-makers and citizens often balk at the idea of increased densities due to concerns about the perceived negative impacts of

[1] *Fleming, Randall, The case for Urban Villages, reprinted from Linkages Issue No. 8, periodical of the Institute for Ecological Health. http://www.fscr.org/html/2000-01-05.html.*

compact urban development. However, research on the topic finds no correlation between urban density and a vast array of urban ills. Conversely, the research shows that density, in fact, results in many benefits for urban areas from the neighborhood to the regional levels. Some of the findings include:

- Residential density does not increase traffic congestion. In fact, as density increases, automobile usage declines
- Per capita energy usage is lower in denser urban areas as a result of the reduction in vehicle trips and trip length associated with increased density
- Density can lead to increases in expendable income by reducing average household transportation costs
- Infrastructure (e.g., water, power, transportation) capital and operating expenditures are lower in dense urban areas than in less densely developed urban areas
- Both commercial and residential properties in close proximity to transit stations enjoy a property value premium
- Increased property values around transit stations translate into increased property tax revenues for municipalities
- Density is not correlated with increased crime
- Increased density in the central city can lead to increased economic productivity, which translates into increased economic performance in both the city and the suburbs

Density succeeds by fostering activity on the street throughout the daytime and into the evening. The keys to successful compact urban development are a mix of uses (including a mix of housing types, shops, and services) and high-quality, pedestrian-oriented design. Through visualization techniques that educate decision-makers and citizens about what successful compact development looks like, opponents of density can be convinced that dense development translates into significant benefits for the neighborhood, city and region. Compact development, can, in fact, act as a panacea for revitalizing our urban neighborhoods. Appendix B provides specific findings from the research about the benefits of density.

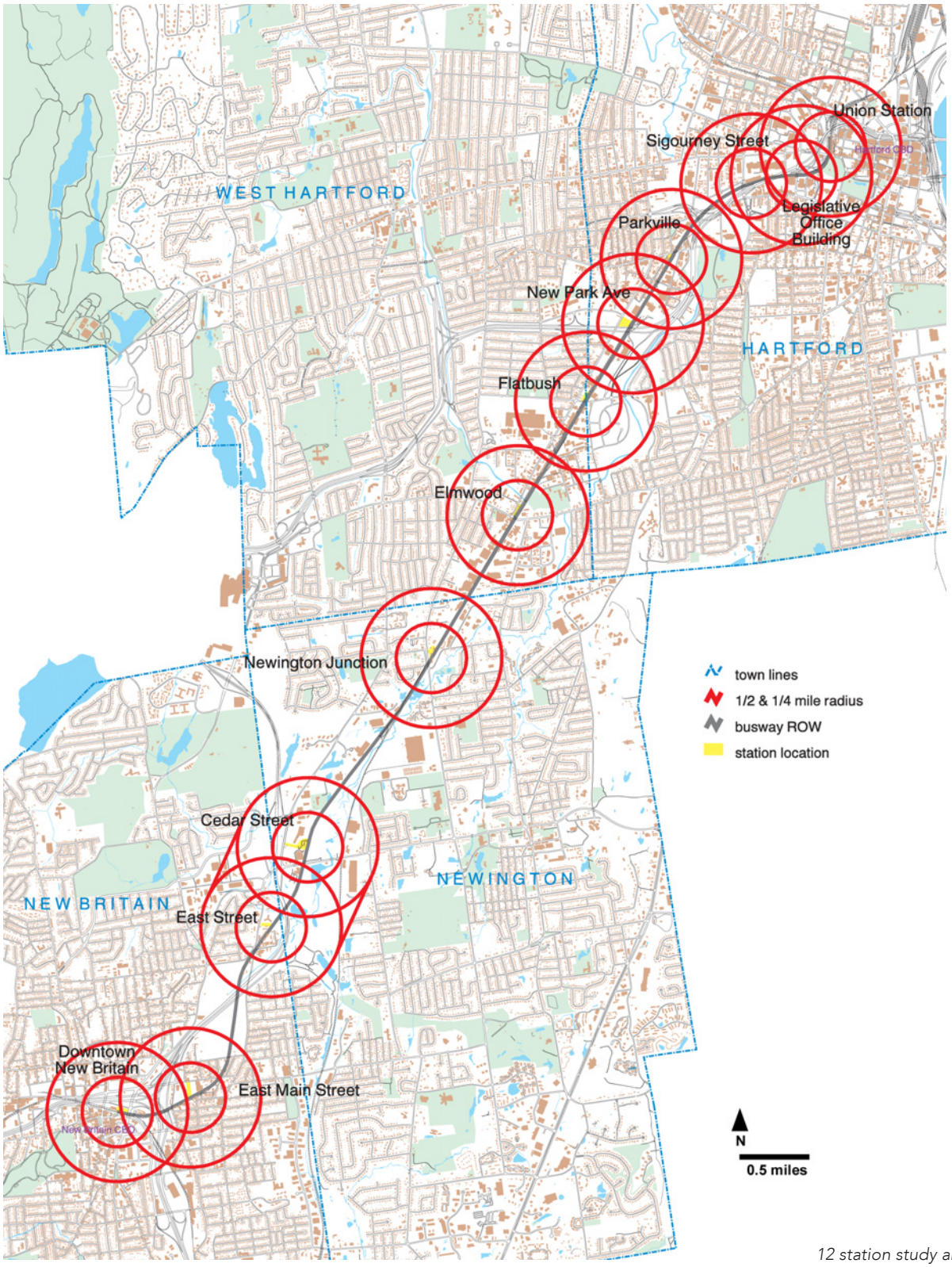
Study Process

The study started by evaluating and comparing each of the busway's 12 station sites for potential transit oriented development opportunities (see 12 station study area map on the following page). With the help of the Municipal Advisory Committee, the consultant team summarized issues and opportunities and used the information as background to evaluate each site. A set of criteria was developed and used to select 6 sites for more detailed study. For all 12 sites, design and development principles were developed to help communities guide development in a transit supportive way. Technical memoranda were published detailing the principles for transit oriented development, similar to the goals and design guidelines included in this report.

For the six station areas selected for further study *[Union Station, Sigourney Street, Parkville (Park Street at Francis Avenue), Flatbush (New Park Avenue at Flatbush Avenue), Cedar and East (studied as one area), and Downtown New Britain]* (see the map on the following page), the consultant team took the design and development principles to the next step and created conceptual land use and development plans to help steer development towards higher density mixed-use projects that will provide economic development opportunities and support transit. Each of the six sites has different characteristics and different approaches to planning for them were used. In some locations alternative development plans were explored before a preferred plan was adopted, while in other locations a preferred concept was apparent from the beginning. Where applicable, options are discussed as possible alternatives to the preferred plan. In addition to preparing development options and/or a preferred development plan for each site, an implementation and phasing strategy was developed to outline the necessary steps required to realize the plan. These plans are the primary content of the Station Area Planning Report developed for each station area.

Project Area History

The busway corridor, and the station sites in particular, are, in the main, broken up into smaller isolated parcels defined by the busway corridor (shared with Amtrak



12 station study area

from Hartford Union Station to Newington Junction), highways, major arterial roads, waterways and wetlands. This is not uncommon in older northeastern and Midwestern cities and is the consequence of an historic layering of transportation corridors in the natural environment.

Early roads and turnpikes in the 18th century typically followed valleys where there were watercourses and wetlands; in the mid-19th century the railroads, seeking routes with relatively level grades, also located in the valleys. In the New Britain-Hartford Busway Corridor there has been a succession of railroad companies – the Hartford and Fishkill Railroad, The New England Railroad, The New York and New England Railroad, and today, Amtrak. Heavy industry developed parallel to the rail line and, as industry declined or moved out in the mid-20th century, I-84 and other limited access highways were constructed in the corridor.

The result of this historic pattern is a patchwork series of potential development parcels at station sites that are:

- isolated by watercourses and wetlands, the Amtrak ROW, major arterial roads and limited access highways, and, in some locations, by large formerly industrial parcels
- impacted in some manner (e.g., by highway noise or industrial pollution)
- characterized by the combination of excellent highway access and large residual parcels so that "auto oriented" zones have been created with big box retail, car dealerships and other auto oriented uses

Despite these challenges, there is opportunity for Transit Oriented Development. The factors above, along with market forces, municipal policies, the direction given by the Municipal Advisory Committees, and the unique and singular physical characteristics of these sites, have given form to the final plans.

This report frames the opportunities and details the development options for the area around Flatbush station.

Site Description / Framing the Opportunities

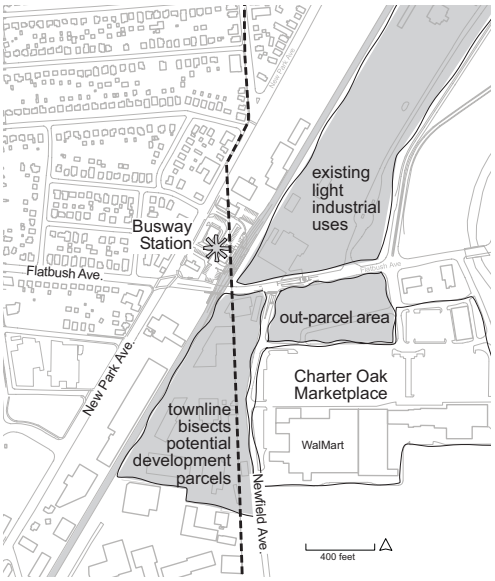
The Project Area

The Flatbush Station is located near the intersection of New Park Ave. and Flatbush Ave. on the town line between Hartford and West Hartford (see diagram of Development Areas on the following page). To the west is New Park Ave.; a large auto-oriented commercial strip that is not geared toward pedestrians. To the east are the railroad right-of-way, the Flatbush entrance and exit ramps to/from Interstate 84, industrial land, and a number of vacant sites. Flatbush Ave. east of the station is also very unfriendly for pedestrians. Without appropriate design attention, the station site, behind the Mobil station and the Dunkin Donuts, could be partially obscured from both New Park Ave. and Flatbush. However, the planned busway bridge (viaduct) over Flatbush Ave. and the two-story station provide design opportunities to create landmark structures that will be visible from all approaches (see diagrams on the following page).

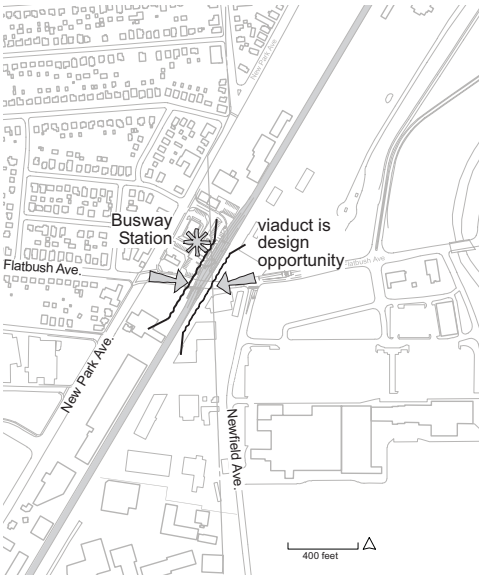
Aerial view of Flatbush Station location, looking north; the red dot indicates the future station site.

There is immediate opportunity for development of a pedestrian friendly zone near the station as a result of the Charter Oak Marketplace planned for the former Charter Oak housing development at the corner of Newfield Street and Flatbush. This large parcel (see Ownership and Key Parcel diagrams on pages 9 and 10) is being developed with a Wal-Mart and a number of smaller commercial tenants before the opening of the busway. Wal-Mart and other stores at the Charter Oak Marketplace will be a significant regional draw. Some customers and employees will arrive by transit and safe, attractive pedestrian routes between the station and this development are important. While the Charter Oak Marketplace is designed in a conventional suburban strip commercial model, because tenants have not yet been designated for all of the out-parcels, there are some opportunities to configure out-parcel development to serve both transit patrons and customers arriving by car. A distinct, transit-related configuration of these out-parcels can initiate a broader trend towards more transit-supportive design for the other redevelopment that may follow, drawn by the Wal-Mart development.

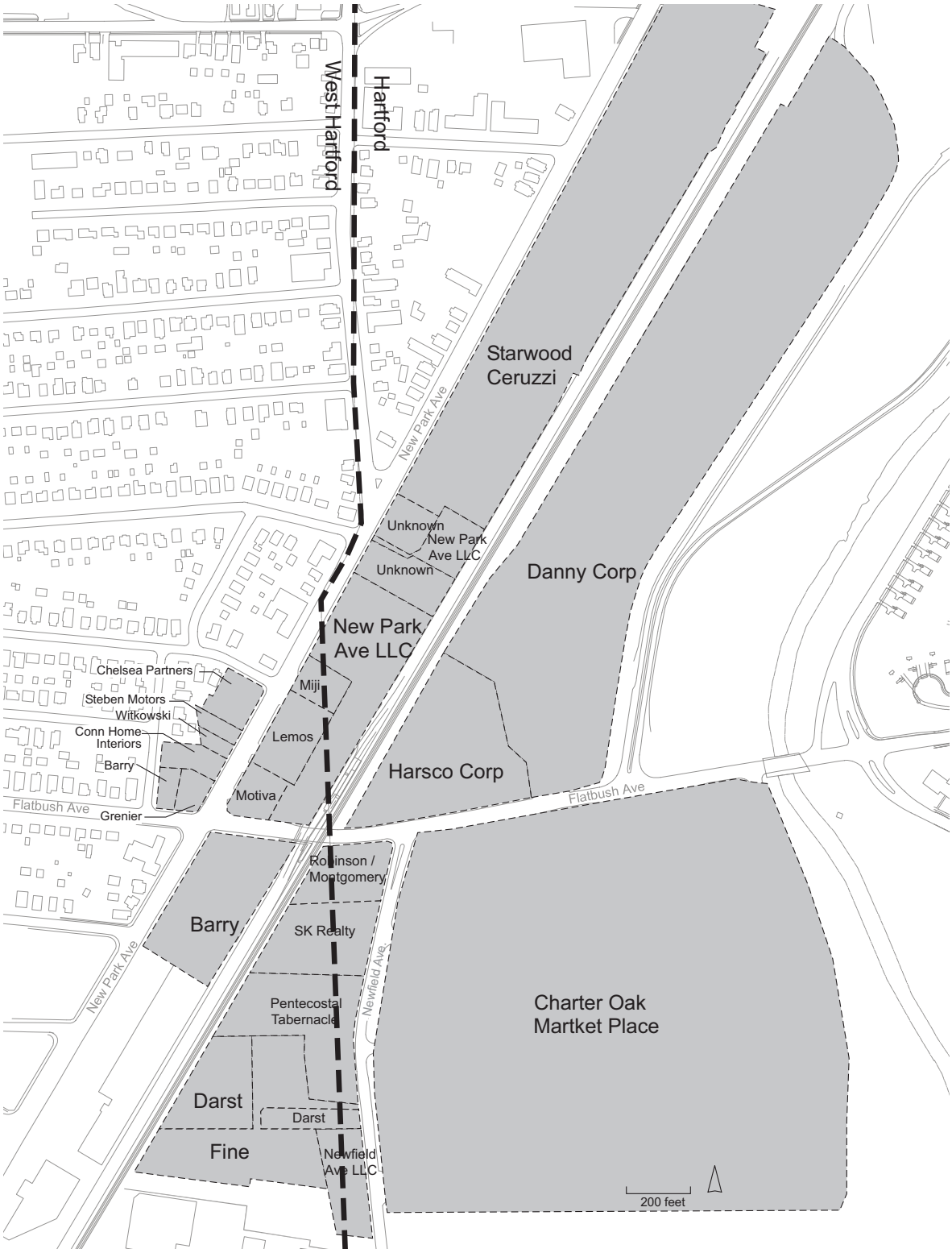
Development on other parcels east of the busway is complicated by ownership patterns, jurisdictional issues between Hartford and West Hartford, and the existence of light industrial uses on the sites. On the west side of Newfield Avenue there



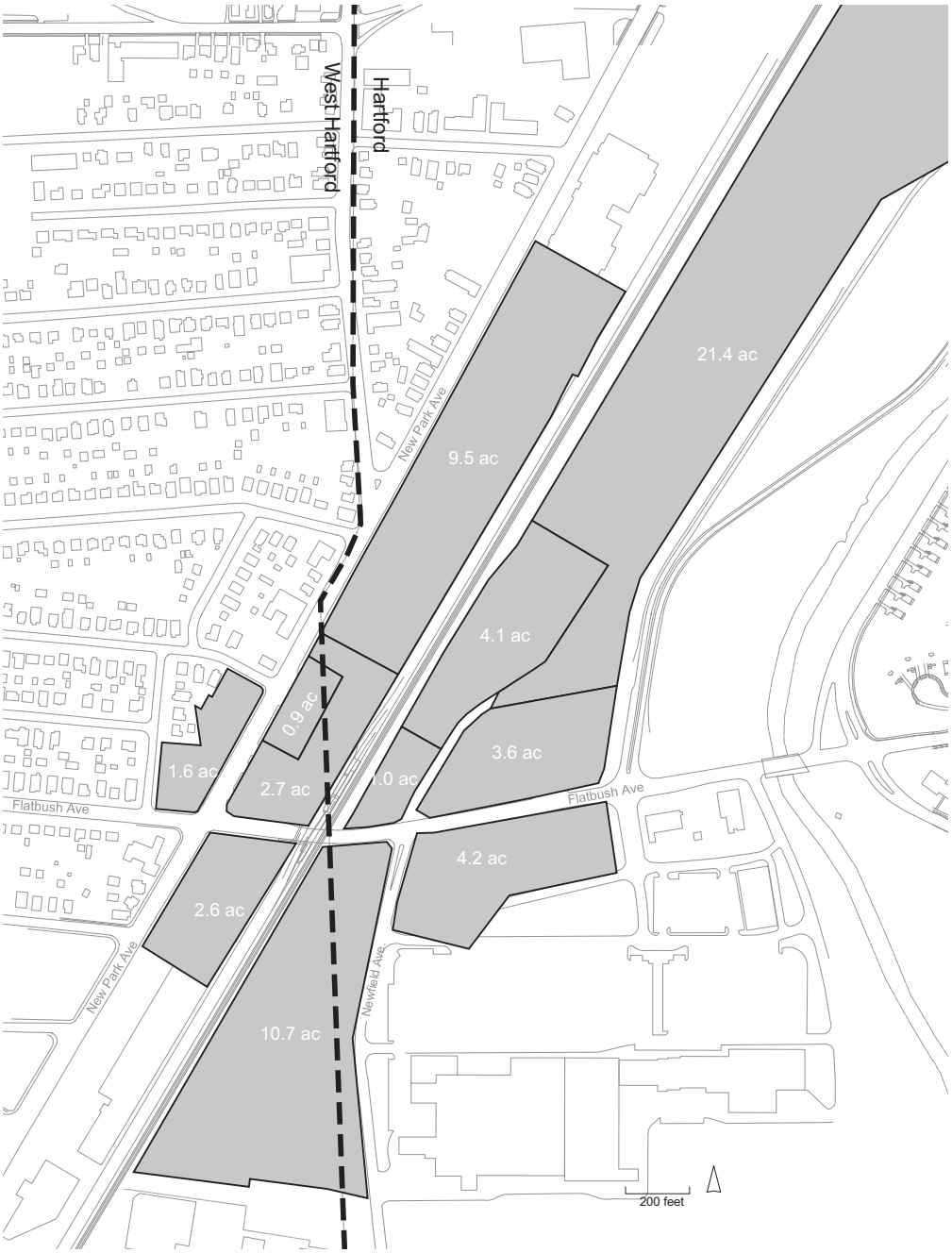
Development areas



Viaduct Opportunity: The busway bridge (viaduct) provides an opportunity for a distinctive gateway design element.



Ownership of key parcels



Key parcels with acreage indicated

are a number of underutilized parcels that have frontage in Hartford but that also lie across the town line in West Hartford. If these parcels can be consolidated, there may be opportunities for additional development close to the station. East of the station, on the north side of Flatbush Ave., there are two very large industrial parcels. If these existing uses can be relocated there is potential for commercial development and/or regional scale recreation facilities immediately adjacent to the station.

To the west of the station is New Park Avenue. From a Transit Oriented Development point of view, the Flatbush intersection – and station location – would be improved if it was designated as a higher density district along the strip. Additional development at this central location will create more destinations in close proximity to the station. Denser development will also help create a safe and active pedestrian crossing by providing a visual cue to drivers that this is an active corner. Since there are a number of viable businesses at this location, development would require either relocation or a market shift and therefore will most likely occur over the long-term rather than near-term.

The Market

As shown on the table on the following page, residential density in the station area is well below the TOD minimum target of 12 units per acre; similarly, employment density is well below the target of 25-50 jobs per acre.

The Flatbush station area is currently a strong retail environment. Recent and proposed developments reflect a continuing interest in the area as a retail destination. In addition to recent investments (Crowley Chevrolet, Dunkin Donuts), the large-format Charter Oak Marketplace is currently under construction. Given the presence of Wal-Mart, a large retail anchor, the development can be expected to attract additional retail clustering at the station area.

Existing establishments at the station area are performing well. According to ESRI Business Solutions, the 31 retailers together with food and drink establishments within a ½-mile of the proposed station generated over $58 million in sales in 2002.

These figures are enhanced when one adds the sales of two of the area's anchors, Home Depot and BJ's Wholesale Club (chains are frequently not captured by ESRI estimates because their sales figures are reported at the national level). According to average store sales figures for 2003, both stores generated between $40 and $50 million in sales for the year. This suggests that the ½-mile station area accounts for up to $150 million in retail sales.

2003 Population	379
2008 Projected Population	384
Projected Percentage Change	5.1%
2003 Dwelling Units	132
2003 Residential Density	3.9 units/acre
2003 At-Place Employment	475
2003 Employment Density	15.1 jobs/acre
2003 % of Public Transportation Commuters	2.8%
2003 % of Walking Commuters	5.6%

Given the local residential population's limited retail potential (a function of a relatively small population and its disposable income), the level of retail trade and food and drink sales is indicative of a regional market. Nearly 65 percent of the total sales are estimated to come from consumers outside the immediate area. Flatbush's high-volume Motor Vehicles & Parts Dealers (NAICS 441) contribute significantly to the retail inflow. In particular, the Automobile Dealers (NAICS 4411) draw an estimated 86 percent of their sales from outside the station area. In addition, some limited retail "leakage" occurs, meaning residents in the immediate area make purchases outside the area for home furnishings, lawn and garden, groceries, health & personal care, clothing and accessories, and books/periodicals/music (see table on facing page).

Given the strength of the existing retail market and continuing investment therein, changes in land use at and around the busway station are not anticipated for the

Flatbush Station Area Selected Retail Market Sales & Potential, 2002

NAICS	Description	Supply (Retail Sales)	Demand (Retail Potential)	Leakage(+) Surplus(-)
Total (All Retail Trade and Food & Drink)		$53,421,331	$18,687,316	-482
Selected Markets				
441	Motor Vehicles & Parts Dealers	$26,737,727	$3,660,366	-75.9
4411	Automobile Dealers	$22,845,846	$3,143,273	-75.8
4451	Grocery Stores	$2,462,548	$3,338,152	15.1
4422	Home Furnishings	$69,234	$133,200	31.6
4442	Lawn & Garden	$62,894	$127,915	34.1
448	Clothing & Accessories	$316,346	$1,040,616	53.4
446	Health & Personal Care	$82,281	$893,078	83.1
4512	Books, Periodicals, & Music	$10,013	$146,945	87.2

Source: ESRI Business Solutions

foreseeable future. The automobile-oriented corridor currently serves Hartford and West Hartford well as a generator of tax revenue and jobs. Recent developments can expect at least 15 to 20-year cost recovery periods before it makes financial sense for this relatively new construction to turn over.

TOD Goals

Through work with the Hartford Municipal Advisory Committee, the West Hartford Municipal Advisory Committee and CRCOG, the following goals were developed for the Flatbush Station area:

- Create a highly visible station and station plaza area
- Encourage eventual use changes for parcels on New Park Ave. and Flatbush Ave. adjacent to station from auto-oriented to transit-supportive
- Design out-parcel development at Charter Oak Marketplace to create a pedestrian friendly zone close to station with good pedestrian connections between the station and Charter Oak Marketplace
- Make the New Park and Flatbush intersection a place that is distinguished for its design and pedestrian emphasis
- Mitigate the impact of big box retail on the pedestrian and transit rider environment by adhering to TOD site-planning principles rather than conventional big box site layouts

These goals are in addition to the two overriding project goals:

- Maximize input and benefits from the transportation infrastructure to the municipalities and neighborhoods along the busway corridor
- Coordinate this major transportation investment with land uses and economic development

Development districts

Preferred Development Option

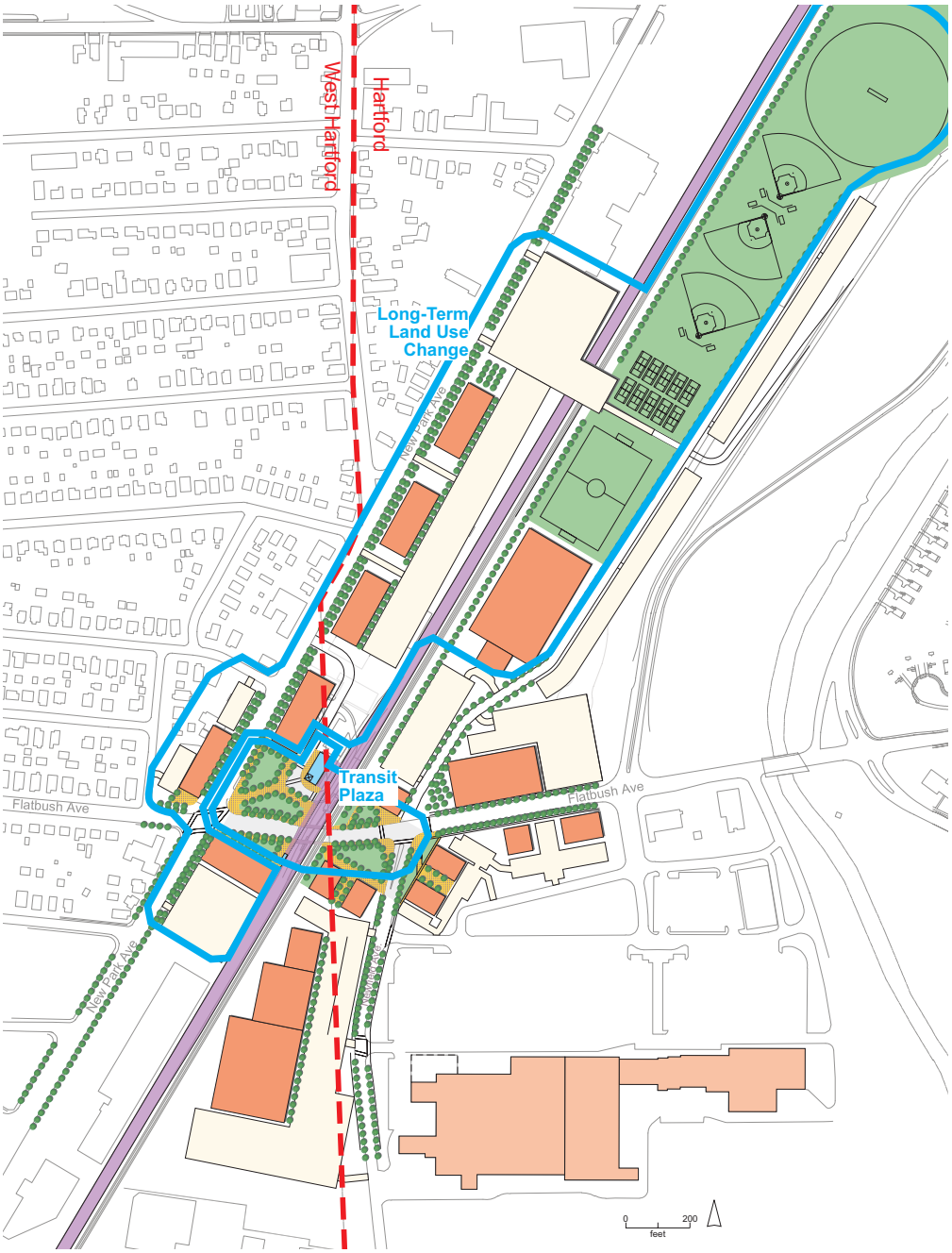
Although many existing and planned uses in the station area are auto-oriented and/or auto-dependent, there will be a number of pedestrians, including many area employees, walking to and from the transit station. The Plan is designed to create an active, safe and attractive environment with an emphasis on pedestrians but also appealing to those arriving by car.

The Station Area Plan provides a way to phase in a transit supportive environment while still recognizing that the current land use market is focused on auto-oriented, big box retail. Conventional retail alone does not qualify as transit-oriented development as it does not provide intensive enough uses—too few employees/users for the land area consumed. However, places evolve and the goal is to orient the framework now towards that evolution.

There are two major components to the preferred development concept for the Flatbush Station area: The Near-Term Development of a Transit Plaza and Long-Term Redevelopment (see Development districts diagram on following page).

The Transit Plaza

Creation of a transit plaza (or series of plazas) extending from the Flatbush Station on New Park Avenue in West Hartford to the southwest corner of the Charter Oak Marketplace in Hartford is a key component of the Plan. The plaza, spread out over five corners, provides a transit/pedestrian-friendly environment connecting the Charter Oak Marketplace and other potential redevelopment parcels with the station and creates a gateway into the Flatbush Station area from both Hartford and West Hartford. The series of plazas - at the station and at private properties along Flatbush Avenue - will help to maintain an unobstructed line of sight from Charter Oak Marketplace to the Transit Station. Because the busway is on a bridge in this location, the station will be two stories, making it even more visible from the Marketplace. This station will be seen from different vantage points and the busway bridge and vertical elements of the station and the transit plaza can, together, create an identifiable image for the station. A large gesture (i.e., a plaza with a

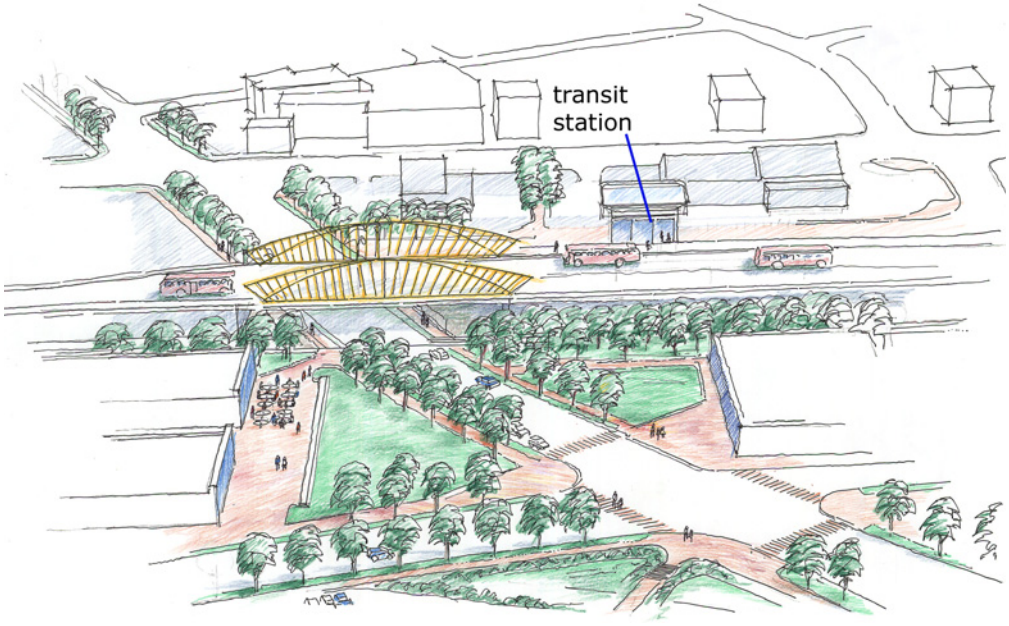


Development districts

bridge and vertical station elements) will create a visual identity for the station. The bridge also will be very visible as a gateway into the area and should receive special design attention, acknowledging its importance to the character of the area.

This railroad bridge in Worcester, MA provides a beautiful gateway into downtown.

The plazas on private property will have to occur over time. As the Charter Oak Marketplace is a new development, it is an opportunity to begin to set this transit-supportive framework of plazas. As subsequent development occurs on other corners of the Flatbush Avenue/Newfield Ave. intersection, driven in part by the transit investment and in part by Charter Oak Marketplace, the framework for a series of transit-supportive plazas can be completed (see drawing below). The Hartford and West Hartford Municipal Advisory Committees met jointly to discuss how best to influence the development of the plazas and sent letters to their



New plazas at corner of Newfield and Flatbush Avenues connect the station to Charter Oak Marketplace. The busway bridge over Flatbush Avenue creates a gateway to the area.

respective mayors indicating support of the transit plazas and the importance of design review focusing on the pedestrian environment and connection to transit.

Long-Term Redevelopment

Recreational Facility

In addition to constraints noted earlier, the linear parcelization of the station area's northeast portion is a challenge for transit-oriented development. One possible solution is the introduction of public and private recreational opportunities including indoor and outdoor soccer facilities (see diagram on page 21).

The concept for the recreational uses provides some synergy with nearby retail uses. The concept plan includes a sporting goods store adjacent to the indoor soccer facility and out-parcel uses that include fast food restaurants. Sports facilities in this location may also provide some synergy with the nearby theater on New Park Ave., providing multiple entertainment opportunities for kids, teenagers and families, as well as shoppers.

On the national level, participation in soccer continues to grow. Soccer is the nation's top participation sport among youth with over 3.6 million registered to play, a number that has been expanding at over 8% per annum since 1990. According to the Soccer Industry Council of America (SICA), 18.2 million Americans played organized soccer in 1999, with 13.8 million under 18. Also, high school participation increased by 65 percent between 1987 and 1999. Among youth 12-17, soccer participation rose 20% to 6 million while other team sports like softball (-12%); baseball (-7%); volleyball (-3%) and basketball (-2%) experienced losses.

In addition to both outdoor and indoor soccer facilities, there is potential for less land consumptive recreation uses including indoor rock climbing, indoor driving range/virtual golf, batting cages, skateboard park, and paintball. Along with soccer, each of these uses has the potential to attract complementary retail uses including sporting goods and outfitters. Ideally, an indoor facility would be designed for adaptation in order to accommodate different sports depending on the season and

fluctuating demand. In the early spring, for example, demand for batting cages and golf practice facilities would intensify as players prepare for the upcoming season. Outdoor recreation space could be utilized as a low cost interim holding use.

Indoor and outdoor facilities would help build youth ridership while softening the impact of big box retail. Given New England's winter climate and the growth of the area's immigrant population and youth sports in general, indoor and outdoor soccer fields could be a relatively inexpensive component of the project's early phasing.

Because the recreation site is bounded by the railroad tracks to the west and only an access road to the east, visibility of the site is limited. Safety and security measures will be important. Programing of the outdoor spaces will help to increase activity levels, and therefore the safety of the spaces. Other security measures can be incorporated into the design of the facility.

Longer-Term Opportunities

Batholomew Avenue Extension

It is possible that this long linear parcel can be developed differently if other plans currently under discussion come to fruition. These other plans include extending Bartholomew Avenue to Flatbush Avenue. If Bartholomew were to be extended this long parcel would gain significant frontage. This may strengthen the retail potential of this parcel; as with other new retail that may occur in this area, site plans should adhere to transit-supportive principles.

Municipal Development Plan

A Municipal Development Plan (MDP) for the Parkville area has been under discussion. An MDP is a locally and state-approved plan describing a project or projects intended to increase employment in an area. Activities authorized by the state statutes include, but are not limited to, acquisition, relocation, environmental evaluations, demolition, property disposition, site and infrastructure improvements. Approval of the MDP by the Commissioner of the CT Department of Economic and

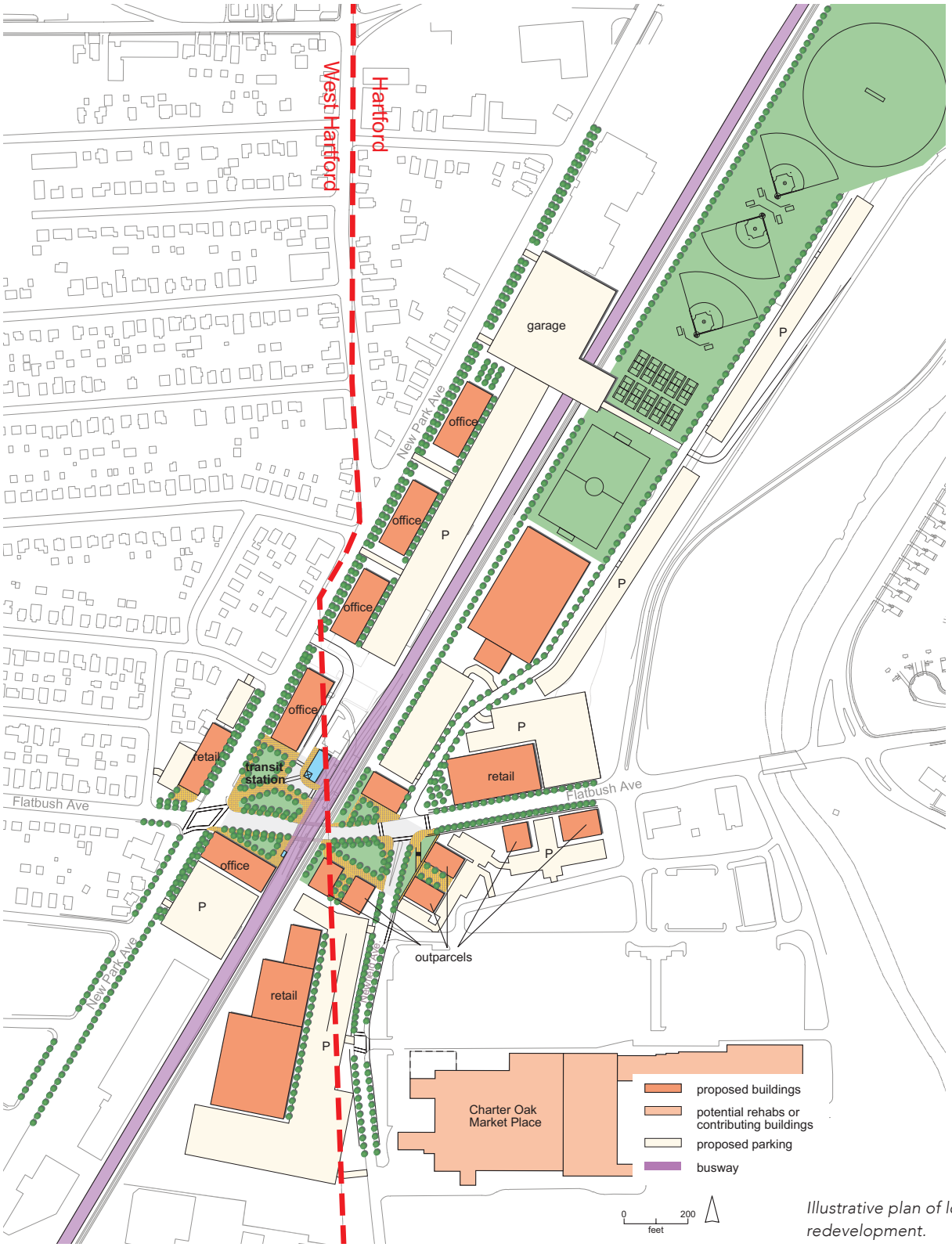
Community Development (DECD) allows the City to apply for state implementation funds to undertake these activities. Currently an application for a MDP is being prepared. The draft area to be incorporated into the MDP includes the areas discussed in the Parkville and Flatbush Station Area Plans; these plans are compatible with the goals of a MDP. If the City proceeds with the MDP application and is successful in having it approved by DECD, the MDP can bring funding to implement some of the actions recommended in the station area plans. It would be important that the MDP also be compatible with the TOD goals.

A Retail Evolution

Given the strong market for existing uses, redevelopment of parcels now in auto-oriented uses along New Park Ave. is a longer term proposition. However, retail uses are very dynamic with significant shifts in popularity. Examples of this include closings of once popular chains such as K-Mart and Hard Rock Café, the rapid growth of Wal-Mart, and the new trend toward Main Street-like "lifestyle centers" as opposed to enclosed shopping malls. The nature of automobile sales could also change significantly in the next 20 years. Certain automobile brands have disappeared (e.g. Yugo, Renault, American Motors) while others have flourished. The demand for typical dealerships may eventually be reduced as mega dealers, large auto parks, urban showrooms, and internet sales continue to multiply.

In the case of the Flatbush station area, transit-related land value escalation could potentially coalesce with this trend in retail evolution to promote the long-term redevelopment of the area's automobile dealerships. In other transit-oriented development markets (Washington, DC, Miami, Atlanta, San Diego), dealership parcels have proven to be valuable assets due to their size, access, and limited structural improvements. The Crowley Chevrolet dealership is one of the larger parcels (four acres) in single ownership in the area while the Volkswagen lot is one of several over two acres in size.

The concept shown on the following page involves relocating two automobile dealerships and an auto parts store flanking Flatbush Ave. to a location further south on the corners of Oakwood Ave. outside of the 1/4 mile walking radius of the



Illustrative plan of long term redevelopment.

station. One of the proposed relocation parcels on New Park Avenue is 4.1 acres, and the other is 2.1 acres, approximately the same sizes as the existing dealerships. These two parcels have good visibility on a busy section of New Park Avenue. An additional adjacent 2.7 acre parcel on Oakwood Ave., on the west side of the railroad tracks, could provide expansion space. (One of these auto dealerships is in Hartford, although the proposed relocation site is in West Hartford.) These parcels have been identified as potential relocation sites to illustrate that other suitable sites do exist for auto uses that in turn would provide for land closer to the station to be used in a more transit-supportive way. This relocation is a long-term recommendation; although these relocation sites may not be available in the future, different sites may well be available.

The two existing dealership sites could then be redeveloped with mixed-use development. Both of these sites are deep enough for office above retail. If these sites redevelop, parking ratios for office should be lowered to 3 spaces per 1,000 square feet to encourage transit use. The prospect of shared parking with the movie theater should be explored and is assumed in the concept drawing. Because the hours of operation for the movie theater are different than those for office, a shared parking arrangement would work very well. Shared parking with adjacent retailers should be explored as well, but is less likely.

Development Summary

The plans described above are conceptual and illustrate the general type and scale of development recommended. Building footprints and total square footages were developed as a means of understanding the capacity of the sites; that is, the scale of development that could be accommodated along with associated parking requirements. For purposes of these plans, parking ratios of one space per housing unit and 3-5 spaces per 1,000 square feet of commercial space, depending on the actual type of commercial use and the availability of on-street parking, were used. The square footage numbers also were used to assess potential economic benefits associated with the plans.

As the plan is implemented, actual developments - based on property line surveys, much more detailed site information and level of design, and current market conditions – will differ from those shown here, but should follow the intent of the site plan and design guidelines (in the Implementation Chapter).

Development Summary Table*

Use	Total New Development
Office	360,000 sq. ft.
Playing Fields	16 acres
Retail	310,000 sq. ft.
Parking	2,700 spaces

**See Appendix B for a more detailed development summary.*

Infrastructure Plan

Major infrastructure improvements include the plaza and pedestrian improvements along Flatbush and New Park Avenues. These improvements include new sidewalks, street trees, pedestrian lighting and crosswalks. Although, as discussed earlier, some of these improvements would include private property and will not happen until parcels are redeveloped, some could happen in the short-term. Sidewalk pavers or colored concrete could be used in the short-term to designate and enhance the pedestrian path along Flatbush Avenue from the station to the corner of Newfield Ave. and Flatbush Avenue, including crosswalks at the intersection. Streetscape improvements could be partially or fully funded as part of the station construction.

Implementation Strategy

Phasing

The development plans look at three time horizons (see diagram on following page):

- **Short-term:** includes the time period up until the end of 2009, or when the busway is scheduled to begin operation
- **Medium-term:** begins in 2010, or at the start of busway operation, and continues through 2017 (up to ten years following the start of busway operation)
- **Long-term:** begins in 2019 and continues through 2025

The three time horizons are approximate and there could be some overlap between the medium-term and long-term periods.

Short-Term

Early phasing plans envision a pedestrian friendly plaza adjacent to the station itself. Potentially surrounded by eating/commercial establishments sited to face it, the plaza could create a civic space with opportunities for outdoor dining and social interaction. In addition, it would provide an identifiable center to the station area, an informal gathering place, and area of respite for transit riders and pedestrians.

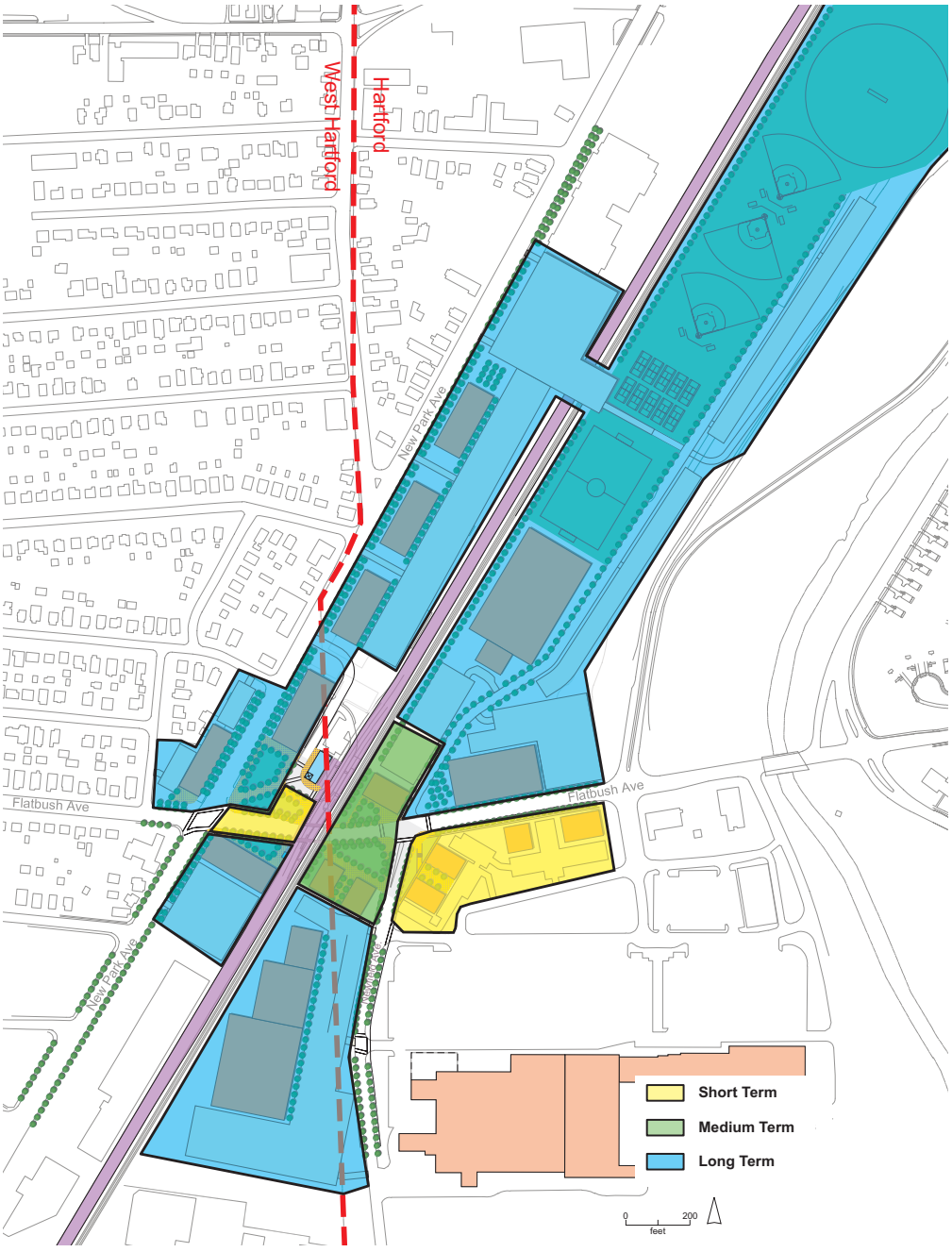
Medium-Term and Long-Term

The remainder of the station area, on the other hand, is likely to remain auto-oriented and difficult to navigate by pedestrians for the foreseeable future. A strong retail market, however, could help leverage pedestrian improvements. As complementary development proceeds commensurate with recent investments, local land use authorities should encourage or require pedestrian enhancements (wider sidewalks, pedestrian scale lighting, planting strips, screening walls, pedestrian connections) for new and existing development. As land values continue to increase with the introduction of the busway and Charter Oak Marketplace, the large building footprints and surface parking lots may be targeted for broader design initiatives.

Short-term: Elements of transit plaza develop both east and west of the busway bridge

Medium-term: additional plaza sections develop along with commercial uses both north and south of Flatbush

Long-term: Change of use along New Park Avenue and east of busway, north and south of Flatbush Avenue



Because the land is already assembled into large parcels, they create longer -term phasing opportunities for redevelopment.

Within the wider station area there may be longer-term potential for market fluctuation and change. Allowing for a reasonable lag period following the commencement of service, the New Britain-Hartford busway cannot be expected to begin to affect significant changes in land use and values until after 2010. Significant transit investments have the potential to impact local and regional real estate markets. In many cases, the travel-time savings and enhanced accessibility associated with higher levels of regional transit service have conferred upon station areas added land value and increased market rents. Should the economic value of the Flatbush station area increase, public and private pressure will mount for the intensification of uses.

Most evidence on commercial property impacts comes from heavy rail systems in larger metropolitan markets (Washington, DC, San Francisco, Atlanta). The potential effect of Bus Rapid Transit is yet to be determined in the United States. However, transit-oriented development at BRT stations in Canada, Australia, Brazil and several Latin American countries, suggests that BRT investments can have market impacts similar to those observed with rail systems. Recent surveys have shown that significant mixed-use development is occurring in the Pittsburgh West Busway and Boston Silver Line Phase II Busway corridor.

Separate from transit investments are general retail market dynamics. With or without the introduction of busway service, the retail environment of the Flatbush station area could change over the course of the long-term planning horizon.

For redevelopment to occur, however, the high value of the current and programmed retail facilities would require strong market demand and relatively high intensity of permissible development to "outbid" the land value of current uses. Assuming existing retail has a high value on the order of magnitude of $1 million per acre, then the following densities would be required to replace high value retail:

- residential densities of 40 units per acre and above ($150,000 sales price per unit or $26,250 in land value per unit) or
- class A office space with structured parking and Floor Area Ratios of 1.5 (1.5 square feet of building for every 1 square foot of land) and floor area land values of $15 per square foot (the amount a developer would pay for the purchase of land)

This would require that the market demand be high enough to fill this space, and is not likely for the foreseeable future; it is assumed that existing and new retail will likely still be in place for at least five to 10 years following the opening of the BRT. Transit oriented development overlay zoning with sufficient density allowances and reduced parking requirements, however, may set the stage for longer-term, more transit sensitive uses.

Long-term priorities should include the intensification of use north of Flatbush Avenue between the busway corridor and New Park Avenue. Although the station area's residential density of 3.9 dwelling units per acre is well below the recommended transit threshold, the parcels are not suitable for housing development. Instead, the auto orientation of the area favors the increase of employment density.

In the long-term, the linear area could potentially support office space, thereby promoting peak hour busway ridership to complement the more irregular patterns associated with big box retail and recreational uses. Due to enhanced employee accessibility and increased land values, other transit-oriented development markets have had success attracting Class A office development. The increased parking demand associated with office development could be met through structured facilities and shared parking arrangements (see *Partnerships & Deal Structure* below).

Also in the long-term planning horizon, additional parcels might be targeted for highest and best transit uses. Opportunity sites include the convenience retail and gasoline station parcels directly to the west of the station. Strategically located in relation to the busway station and future retail, these sites can expect significant increases in economic value. This rate of appreciation will benefit the current

owners should they choose to relocate at or before the end of their respective amortization periods.

Zoning

The Hartford Municipal Advisory Committee recommends that the City of Hartford consider a proposal for a TOD Overlay District drafted by the City Planning Department. That overlay district should be applied to the Flatbush station area. A draft of the TOD Overlay District is included in Appendix C.

Changes to the West Hartford zoning also should be considered in order to ensure that, over time, sites are redeveloped for more transit-supportive uses such as office, retail and light industrial with high density employment. A draft TOD zoning ordinance — an overlay district — is included in Appendix D. The proposed zoning overlay district does not allow currently allowed uses, such as motor vehicle sales/service/repair, gasoline stations and warehouses, outdoor storage of material and equipment, and contractor's yards, which are auto-dependent and/or tend to detract from the pedestrian environment.

Design Guidelines

Adopting design guidelines for the Flatbush Station area is important for two reasons: 1) they provide the various parties involved in implementation a common framework for types of development that should be encouraged; 2) they provide developers a sense of comfort that the design integrity of the area will be maintained.

The illustrative plans for each station adhere to the basic site planning design guidelines below. The plans illustrate recommended locations for building siting, both for each parcel and for the larger district, but as implementation begins other, more detailed, proposals will be considered for individual sites. The illustrative plan and the guidelines below can be used to evaluate individual projects.

The general guidelines for all station areas are:

- All development must be designed to enhance or create urban character that is pedestrian friendly, convenient for transit patrons accessing stations on foot, and safe. This is done through the siting of buildings at the sidewalk edge and using landscape elements that reinforce the street edge. Buildings should have at least one entrance on the street. Building facades should have street level windows and should include active ground floor uses. Parking should be located behind buildings or screened with landscape elements.
- Sidewalks should be separated from moving traffic by planting strips and on-street parking. Street trees will frame the sidewalk space and improve the visual character of the station area for drivers on local streets (see typical ROW sections in *City of Hartford: Principles for Transit-Oriented Development*, December 2003- published separately).
- Streets in station areas should be as narrow as possible to facilitate pedestrian crossings without impeding traffic circulation. Slowing traffic will also allow drivers to take note of new development and hopefully entice them to stop and shop. Within station areas, streets need to be designed for people, vehicles, and businesses, not just to meet highway standards.
- Where possible, buildings should be designed to accommodate various uses over time. If market conditions do not support ground floor retail, buildings should be design to be easily retrofitted to accommodate retail at a later date.
- Building windows should be individual openings in the façade, not continuous bands, with well-defined lintels and sills. Building tops should be shaped with attention to their view against the sky. Use of upper floor setbacks and peaked roofs to articulate the roofline is encouraged. Façade planes should be visually broken to reflect the scale and development pattern of other buildings on the street. Mechanical penthouses and other projections or roof elements that are visible from the street should be architecturally integrated with the overall building design.

Office designed to accommodate ground floor retail at future date. Window system can be easily modified to provide storefront access. Building sited at sidewalk edge and simple landscape reinforces street edge.

Individual window openings as opposed to continuous bands break up the facade and add interest at the street level.

Because of the hybrid nature of ongoing development at Flatbush, the site plan for Charter Oak Marketplace area shows some proposed development that does not meet the general guidelines listed above. In this case compromises should be considered if they support the concept of out-parcel development oriented around a transit plaza close to the station.

- Development on all of the transit plaza parcels should be oriented to the busway overpass. This will ensure that the station is visible from proposed development and development is easily accessible from the station.
- Particular attention should be paid to developing safe pedestrian crossings because of the scale and typical speeds along Flatbush Ave. and New Park Ave.
- Long term office development proposed along New Park Ave. should be guided by these general guidelines.

Partnerships and Deal Structure

The anticipated near-term and longer-term retail development character of the area is well established. The public sector should work with the private sector to provide enhanced pedestrian linkages and design modifications to create a more transit friendly environment. This would likely involve the public sector working closely with the private sector in providing free design services and capital contributions to the

pedestrian and design enhancements. Accelerated approvals and processing could be an incentive to encourage more transit friendly design. The public sector must work closely with the private sector to document the potential economic, design and development benefits of these improvements.

Over time, TOD overlay zoning districts with possible density bonuses, reduced parking requirements and a streamlined approval process could set the stage for more transit sensitive development assuming significant changes in the marketplace. Similarly, public/private sector cooperation with the public sector financially aiding in the development of recreation space could allow such uses to enhance the overall environment and create opportunities for sports related retail venues. The creation of unique elements such as recreation, particularly in conjunction with the existing movie theaters, may be desirable in generating a competitive market place advantage for potential retailers.

The recreational component of the Flatbush station area has significant potential for public and private interaction. The coordination and siting of indoor and outdoor facilities should be a joint effort between the City of Hartford and the private sector. Rather than develop and program two new facilities, the City's Recreation Department should engage and work with a private developer or nonprofit entity to program recreational opportunities and construct an indoor sports facility within the station area. Coupled with new public facilities adjacent to the site, the privately operated center would help create a recreational destination with year-round use. In the interim period, the City and the indoor facility can work to attract a sporting goods retailer to the Flatbush station area. A large user of this kind could potentially support and sponsor the recreational facilities while capitalizing on its prime project adjacencies.

During later phases, the intensification of uses north of Flatbush between the busway corridor and New Park Ave. will require significant public/private cooperation. First, the proposed redevelopment would require an increase in allowable densities. In order to facilitate office development, the permissible FAR would have to approach 1.5, the allowable FAR in the proposed Zoning Overlay District. Shared

parking arrangements mentioned below would help effectuate this change in land use controls.

In the interest of economic development and regional mobility, the City of Hartford and the Town of West Hartford should work with the property owners and users to implement the recommended long-term land use changes. The public sector can facilitate the relocation of the two auto dealerships by offering modest incentives and assisting in land assembly. With the proposed new FAR regulations, redevelopment could accommodate a significant amount of new office space. Local land use authorities should allow and encourage a shared parking arrangement between the office development and the movie theater. Planning officials should also be encouraged to relax the parking standards given the increased level of transit service.

Development Plan Summary: Next Steps

The following summarizes the phasing of the key development components:

Short-Term: 2004-2009

- Consider incorporating station area plan in Hartford and West Hartford Plans of Conservation and Development
- Conduct design review to achieve modifications of Charter Oak Marketplace out-parcels at the Newfield Avenue/Flatbush Avenue intersection
- Consider adoption of TOD zoning changes as outlined in Appendices C and D. These changes would encourage uses that create employment and restaurant density, and enhance the pedestrian environment.
- Develop urban design criteria for the bridge structure over Flatbush Avenue to ensure that the bridge functions as a handsome icon and gateway to the area
- Initiate discussions with property owners of linear parcels north of Flatbush Avenue and gauge developer interest in development of an indoor sports facility

- Work with ConnDOT to ensure creation of the best possible pedestrian environment both at the station and from the station to the corner of Flatbush Avenue and Newfield Street. Also work with ConnDOT on the design of the busway bridge over Flatbush Avenue.
- Identify sources of funds for capital improvements

Medium and Long-Term: 2009-2025

- Continue design review and suggest appropriate modifications for development of parcels on Flatbush and New Park Avenue
- As parcels redevelop along New Park Avenue, continue design review and work with developers and property owners to enact shared parking agreements to reduce overall parking requirements and to create a plaza-like atmosphere at Newfield and Flatbush Avenues
- Assist property owners and developers in relocation activities required for redevelopment of parcels along New Park Avenue

Appendices

A: The Case for Density

B: Detailed Development Numbers

C: Proposed Zoning - Hartford

D: Proposed Zoning - West Hartford

Appendix A: The Case for Density

Many studies have shown that density is a necessary component of successful transit-oriented development. Starting at densities of 12 dwelling units per acre, research shows that dependence on the automobile begins to decline and the use of transit increases. At 16 units per acre, these trends become significant. To be truly successful, residential density must be part of a vibrant community, with sufficient neighborhood-level jobs, services, and shops to meet the daily needs of the residents, and designed to attract and accommodate substantial pedestrian activity.[1]

While urban planners and transit proponents often recognize the benefits of density around transit station, many policymakers and urban area residents remain skeptical. Opponents contend that density equates with a myriad of urban ills, including increases in traffic congestion, public expenditures on infrastructure and services, and crime, while causing property values to decrease. Some suggest that density equates with poverty, although no empirical data supports this relationship.

Because of the debate over density and its impacts on the urban environment, considerable research has explored just how density effects urban neighborhoods. The overwhelming evidence is that urban density results in personal and public cost **savings**, environmental benefits, and an improved local and regional economy. Conversely, the urban ills often associated with density are more clearly related to the failure to mix uses and provide transportation options within an urban setting, as well as poor design that discourages pedestrian activity. Significant findings from the research are documented below.

Traffic Congestion

One of the most often cited arguments against increased residential density is that, by concentrating more people into a smaller area, traffic congestion will increase and become unmanageable. Many studies have been conducted to assess the relationship between density and traffic congestion, and the findings have consistently shown that residential density does not correlate with increased traffic

congestion. In fact, the research indicates that, as residential density increases, vehicle use decreases.

The argument that density causes more traffic congestion is flawed in part because it fails to recognize that the denser a neighborhood becomes and the greater the mix of uses found in that neighborhood, the less the residents rely on the automobile. "Research suggests that densities of seven units per acre are needed to support a small corner store; a small supermarket requires 18 units per acre."[2] In urban areas with higher densities, retail establishments and services can locate within walking distance of their customer base, reducing reliance on automobiles. Urban "villages with adequate jobs, housing, shops, and entertainment that are serviced by good transit appear to be most effective in reducing automobile dependent leisure trips. In 11 US metropolitan areas, mid to high rise neighborhoods with employment centers, retail, and service areas and 1.5 mile commute distances have at least 25% of the population walking or biking to work."[3] "Individual census tract statistics gathered in the 1996 Canadian census…showed that the denser a neighborhood gets, the less it relies on auto travel and more on foot and public transit. The Smart Growth Network found that "when communities are created that double household density, vehicle travel is reduced by 20 to 30 percent, as people use convenient and cheaper alternatives to the car."[4]

Energy Consumption

The relationship between density and energy consumption follows directly from the reduction in vehicle trips and trip length associated with increased density. With fewer vehicle trips, residents of denser urban areas use less gas, and thus consume less energy. In contrast to areas of low density development, energy usage for vehicle trips in higher density urban settings can be reduced by up to 43%.[5] "With mixed uses involving 1 to 1 job/housing ratios, up to 68% less energy can be used and average commute distances have been reduced by 28%."[6] A study for the California Energy Commission found a direct correlation between reductions in vehicle miles of travel and energy consumption.[7]

Expendable Income

Higher density development near transit can benefit residents by providing real gains in expendable income. These gains result from two different impacts of transit-oriented development. First, in higher density areas well-served by transit, the average annual cost to operate a vehicle was found to be 33 percent less than in less dense neighborhoods with fewer transit options.[8] This difference is attributable to reduced auto ownership in the denser areas served by transit, and shorter distances to services and shopping (resulting in decreased spending on fuel and auto maintenance.) The Federal National Mortgage Association (Fannie Mae), in conjunction with the banking community in several US cities, recognize this savings and its impact on expendable income, and have responded with the Location Efficient Mortgage (LEM) program. The LEM program considers this transportation cost savings when calculating an applicant's income qualifications for a mortgage, allowing homebuyers in areas served by transit to qualify for higher mortgages than their income would otherwise permit.[9]

Denser, transit-oriented development also can increase an individual's buying power if communities allow reductions in parking requirements for new housing construction in neighborhoods served by transit. "Required parking raises the cost of new housing construction by $20,000 to $40,000 or more per space."[10] By not requiring parking, or by lowering the number of spaces required per unit, housing construction costs can be lowered, translating into reduced housing prices. These reduced prices have the effect of both providing home ownership options to a broader segment of the population, and allowing homeowners to reduce their housing costs, thereby increasing their expendable income.

Public Services and Infrastructure

Another argument proffered by opponents of urban density is that density will result in higher infrastructure costs. This argument is not borne out by the research. In fact, "more compact neighborhoods require fewer linear feet of utility lines – like water, sewer, electricity, phone service, and others – than dispersed communities do. As a result, many communities find that it is cheaper to provide and maintain

many services to compact communities."[11] High density development can provide economies of scale in infrastructure investments, and by encouraging infill, excess capacity from existing utility infrastructure can be tapped before new construction is required.[12]

A 2004 Brookings Institute report catalogues the findings from numerous studies of the costs of providing services and infrastructure to densely developed urban areas compared to less dense urban and suburban development.[13] The consistency of findings is remarkable. All of the studies found a substantial cost savings for providing infrastructure and municipal services to more densely developed urban areas. Some of the more striking findings include:

- A 1998 study found that "compact…growth patterns could reduce 25-year road-building outlays by 12 to 26 percent.[14]
- A 1989 study of the Orlando metropolitan area found that "the public capital and operating costs for close-in, compact development were much less than they were for fringe, scattered, linear, and satellite development…the costs per dwelling ranged from a low of $9,252 for downtown Orlando (1989 dollars) to a high of $23,960 to serve new homes in … a low density fringe development."[15]
- Additional studies showed that shifting development from a pattern of sprawl to planned development "could reduce total road-building expenditures 12 percent in South Carolina, 12 percent in Michigan, and 26 percent in New Jersey."[16] Similar savings were reported for water and sewer infrastructure.
- The Brookings Insistute research survey also showed substantial savings in operating costs resulting from economies of scale, efficiency of service delivery, and the ability to draw on excess capacity in already developed areas.[17]

The overarching finding from the Brookings Institute study is that, while the magnitude of the savings will differ somewhat from community to community, governments can reduce the cost of public services and capital expenditures, saving taxpayers money, by channeling development into areas where existing infrastructure and services can be more efficiently utilized.

Property Values

One common misconception about density is that increased density results in decreased property values. In fact, some of the most expensive neighborhoods in many U.S. metropolitan areas have densities in excess of 50 units per acres. For example, two of the most desirable residential areas in Boston, Newbury Street and Commonwealth Avenue, have residential densities of 60 units per acre and 100 units per acre, respectively.[18]

Research on the relationship between proximity to transit stations and property values consistently shows that residential and commercial properties in close proximity to transit enjoy a property value premium. Some of the research results are as follows:

- In Washington, DC, the value of residential land within the impact area of Metro stations was found to be $6 to $8 per square foot greater (1980 $s) than land in non-station locations.[19]
- Residences near the Lindenwold High Speed Line in Philadelphia realized a location premium of 6.4 percent.[20]
- "Properties near the Los Angeles Metro Rail have average sale prices of $102.13 per square foot compared to $71.13 for properties that are not near the Metro Rail."[21]

The above-cited studies focus on residential property values. Similar studies of commercial properties in the vicinity of transit stations have shown that these properties also realize a property value premium directly linked to their proximity to transit stations.[22] The increased property values associated with locations near transit translate into an increase in the municipal property tax base, and a direct increase in tax revenues in the very neighborhoods where average public infrastructure and service delivery costs are reduced due to increased densities.

Crime

An additional argument often put forward by opponents of density is that increased density leads to increased crime. The research does not support this argument. International comparisons of crime rates, which show lower crime rates in more densely populated European and Asian metropolitan areas than in less-dense US cities, suggest that factors other than density contribute to high urban crime rates in the United States.[23]

In fact, a strong argument can be made that increased density, combined with a mix of uses that generate activity throughout the day and evening, and designed to be pedestrian-oriented, leads to increased public safety. A high density neighborhood with a mix of uses will result in more pedestrian activity throughout the day and evening, creating more "eyes on the street", and a built-in deterrent to crime. Furthermore, infill development on vacant lots and surface parking sites will eliminate areas devoid of activity. One "key to ensuring that density improves security is design that encourages greater neighborhood surveillance and interaction."[24]

Regional Economic Performance

The Brookings Institute study cited above also looked at how density impacts regional economic performance. The study found that urban planning strategies that encourage "compactness, density, and "quality of life" enhancement seem to support – or at least be associated with – modestly strengthened economic performance."[25] Some of the findings include:

- Doubling employment density increases productivity by approximately 6 percent.
- Communities that utilize growth management techniques to limit sprawl realize a 1 percent increase in their economic performance (measured in terms of personal income) relative to other regions.
- Income growth in the central city of a metropolitan area translates into corresponding income growth in its suburbs.[26]

These findings suggest that the economic benefits of compact development reach well beyond the individual neighborhood where density occurs to the entire city and metropolitan area.

Density, Design, and Mixed Uses

The above discussion serves to debunk a number of the myths associated with urban density. Research suggests that density, in fact, can provide numerous benefits to a municipality and its residents. The real keys to successful development at densities that support transit are 1) to incorporate a mix of uses, and 2) to design active, vibrant, pedestrian-oriented communities. The mix of uses should include a variety of types of residences, including townhouses, condominiums and apartment. By offer a range of housing types, the community will attract a variety of residence from young singles to empty-nesters. A heterogeneous population will ensure activity on the street during the day (when many folks are at work) and in the evening (after offices and service establishments close.) In addition to residences, uses should include shops and businesses that will be open during the day and that can provide job opportunities for neighborhood residents, as well as restaurants and entertainment establishments that will attract nighttime activity.

Design is also a crucial component of successful urban development. Urban neighborhoods should be designed to be pedestrian-friendly, contain lively public spaces, and respect the context of the surrounding community (with particular attention to the historic context of the built environment). Building materials, signage, streetscapes and street furniture, the location of buildings and entrances relative to the sidewalk, and the location of parking will all contribute to the success of urban neighborhoods and transit-oriented development. Buildings should be located close to the sidewalk, with parking located on-street, or in back of buildings. Ground floor space should be for active uses such as retail, with multiple doors and windows facing the street (see Design Guidelines in the Implementation Strategy chapter of the report). Density can and should be a central component of these neighborhoods.

Visualizing Density

Many opponents of density are influenced by memories of 1960s-style high rise public housing projects, or visions of dense office development accompanied by street-level garage entrances that undermine the pedestrian environment. Both decision-makers and residents need to be educated about what higher density, mixed-use, transit-oriented urban villages, and vibrant transit-served city centers can look like.

This can be accomplished through visualization techniques that show what density looks like elsewhere, as well as what density can look like around the proposed station areas. Real-world examples of density can be downloaded from existing web sites[27], or obtained directly from communities that have already accomplished compact transit-oriented development projects. Computer-generated visualization techniques that superimpose new development designs on photographs of existing station areas (such as the techniques used in CRCOG's TCSP project) can be used to help people understand what compact transit-oriented development can look like around the stations.

Finally, in a recent Boston-area conference on density, one participant noted that to implement public policy, both a problem and a solution to that problem must be articulated. Thus, in educating the public, density must be presented as a solution to many of the very urban ills that opponents of density have often offered as arguments against it. The goal should not be to demonize sprawl, but instead to advocate for the many benefits of density.[28]

[1] *Fleming, Randall,* The case for Urban Villages, *reprinted from Linkages Issue No. 8, periodical of the Institute for Ecological Health. http://www.fscr.org/html/2000-01-05.html.*

[2] *Designing for Transit: A Manual for Integrating Public Transportation and Land Development in the San Diego Metropolitan Area. July 1993.*

[3] *Op.cit., Fleming.*

[4] *Smart Growth Network,* Getting to Smart Growth: 100 Policies for Implementation, *the International City/County Management Association, undated, p. 10.*

[5] *Op. Cit., Fleming.*

[6] *Ibid.*

[7] *Parsons Brinkerhoff,* Smart Growth Energy Savings; MPO Survey Findings, for the California Energy Commission, September 21, 2001, p. 8.

[8] *Perkins, Broderick,* The High-Density Solution for Tight Markets. *http://realtytimes.com/rtcpages/20020509_highdensity.htm*

[9] *www.locationeffeciency.com*

[10] ___, unbundle new urban parking + housing. *ttp://www.dbarchitect.com/www-writing/parking.html*

[11] *Op. cit., International City/County Management Association.*

[12] *California Planning Roundtable, Myths and Facts about Affordable and High Density Housing. http://www.abag.ca.gov/services/finance/fan/housingmyths2.htm*

[13] *Muro,.Mark,* Investing in a Better Future: A Review of the Fiscal and Competitive Advantages of Smarter Growth and Development Patterns, *The Brookings Institute Center on Urban and Metropolitan Policy, March 2004.*

[14] *Ibid., p. 13.*

[15] *Ibid.*

[16] *Ibid.*

[17] *Ibid., p.18.*

[18] *Rappaport Institute for Greater Boston,* The D Word, *January 2004 Conference Proceedings. http://www.ksg.harvard.edu/rappaport/forums/thedword.htm*

[19] *PriceWaterhouseCoopers,* Richmond/Airport-Vancouver Rapid Transit Project, *April 3, 2001, p.2*

[20] *Ibid., p. 3.*

[21] _____, Urban Sprawl Ideas that Work. *Http://www.stateaction.org/issues/sprawl/sprawlideas.cfm*

[22] *Op. Cit., PriceWaterhouseCoopers.*

[23] *1000 Friends of Oregon,* The Debate Over Density: Do Four-Plexes Cause Cannibalism? *http://www.friends.org/issues/density.html*

[24] *Local Government Commission in cooperation with the US Environmental Protection Agency,* Creating Great Neighborhoods: Density in Your Community, *September 2003 (sponsored by the National Association of Realtors).*

[25] *Op. Cit., Muro, p. 21.*

[26] *Ibid., pp. 21-23.*

[27] *See, for example, www.architechts.org/emplibrary/A1_a.pdf.*

[28] *Rappaport Institute for Greater Boston,* The D Word, January 2004 Conference Proceedings. http://www.ksg.harvard.edu/rappaport/forums/thedword.htm

Appendix B: Detailed Development Numbers

Use	Footprint area	Stories	Total area	
Proposed				
Between Newfield and Flatbush				
Retail	68,500	1	68,500	sqft
Retail	29,700	1	29,700	sqft
Retail	11,900	1	11,900	sqft
Resturaunt	7,000	1	7,000	sqft
Resturaunt	7,000	1	7,000	sqft
Surface parking			513	spaces
North of Flatbush East of ROW				
store	10,000	1	10,000	sqft
sporting goods	40,000	1	40,000	sqft
indoor soccer	89,925	1	89,925	sqft
Fields			16	acres
surface parking			651	spaces
Charter Oaks Marketplace Out Parcels				
Resturaunt	7300	1	7300	sqft
Resturaunt	8000	1	8000	sqft
Resturaunt	6400	1	6400	sqft
Resturaunt	9700	1	9700	sqft
Surface parking			118	spaces
Long Term Build-out				
New Park Ave (north of Flatbush				
Office	20,000	4	80,000	
Office	20,000	4	80,000	
Office	20,000	4	80,000	
Office	20,000	4	80,000	
Retail	15,000	1	15,000	
Surface parking			392	spaces
Garage	290	3	870	spaces
New Park (south of Flatbush)				
Office	20,000	2	40,000	sqft
Suface parking			155	spaces

Appendix C: Proposed Zoning - Hartford

Introduced by:

Heading And Purpose: AN ORDINANCE ESTABLISHING DEVELOPMENT PROVISIONS FOR TRANSIT ORIENTED DEVELOPMENT OVERLAY DISTRICT

COURT OF COMMON COUNCIL
CITY OF HARTFORD,

2003

Be It Ordained by the Court of Common Council of the City of Hartford:

Section 35- Purpose

The purpose of the Transit Oriented Overlay District is to create a more walkable, less auto-oriented and better-landscaped environment around the transit stations for any dedicated fixed guideway transit system, to encourage mixed use development, and to connect existing neighborhoods to transit stations through appropriate development, pedestrian-friendly design, attractive architectural design, and landscaping. Generally, any parcel of land fronting on a major street in the City of Hartford that is within a 1500 feet radius of a transit station along a fixed guideway transit system shall be developed according to guidelines in the following sections.

Section 35- Uses Permitted

Use requirements of the underlying zoning districts remain in force, except as noted in Section 35-xxx.

Section 35- Uses Not Permitted

The following uses shall not be permitted in the Transit Oriented Overlay District:

- Automobile General Repair and Services
- Automobile Limited Repair and Services
- Automobile Wash, Self Service
- Automobile Laundry
- Motor Vehicles – Retail
    - ♦New and Used Cars
    - ♦Used Cars only
    - ♦New and Used Trucks
- Motor Vehicles or Gasoline Fueling Stations
- Motor Vehicles or Gasoline Service Stations
- Eating Places with Drive-in or Curb Service
- Commercial Parking Lots

- Junk and Scavenger Yards
- Motor Vehicle Wrecking and Junkyards
- Solid Waste Disposal
- Drive-in Movies

Section 35- Density Waiver

A Special Permit may be granted from the Planning and Zoning Commission to waive residential density, height limits, lot occupancy, and open space requirements from the maximum underlying zoning regulation provided that no portion of the structure shall be within fifty (50) feet of a residentially zoned property. The open space requirement may only be waived if the development is within fifteen hundred (1500) feet of a public park.

Section 35- Required Parking and Loading Areas

a. All development in the Transit Oriented Overlay District shall provide the minimum onsite parking and loading spaces as required by the present zoning code, unless stated otherwise in this section.

b. The maximum number of onsite parking spaces shall not exceed the minimum requirement by more than 5%. This requirement shall not apply to residential uses.

c. The minimum required number of parking spaces may be reduced by the number of on-street parking spaces located along the building frontage. Only those parking spaces that are located on the same side of the street as the development and that do not extend beyond the street frontage of the subject property may count toward the reduction. This allowance shall not apply to residential uses.

d. Shared Parking

    1. If there is more than one use on a lot, then the total parking requirement shall be equal to the sum of the parking requirement for each individual use.

    2. On lots with more than one use, the total parking requirement may be reduced, provided that the applicant submits credible evidence to the satisfaction of the Zoning Administrator that the peak parking demand of the uses do not coincide, and that the accumulated parking demand at any one time shall not exceed the total capacity of the facility. Such evidence must take into account the parking demand of residents, employees, customers, visitors, and any other users of the lot. It must also take into account parking demand on both weekends and weekdays, and both during the daytime and overnight.

e. All surface parking lots shall provide a perimeter-landscaped strip a minimum of 5 feet wide around the edges of the entire lot. The landscaped strip shall contain no fewer than 4 trees for every 100 linear feet, as well as shrubs no less than 4 feet in height. A wall or decorative fence measuring 2.5 to 4.0 feet in height, as measured from grade, may be added to the landscaping strip.

f. For surface parking lots greater than 20 spaces, at least 15 percent of the interior area shall be planted with trees and shrubs.

   1. Each planting area shall be a minimum of 25 square feet in size and have no dimension less than 5 feet.

   2. Each planting area shall have at least one tree.

   3. No row of parking shall contain more than 10 spaces wide without installation of a planting area.

g. Bicycle racks shall be provided onsite at a rate of one bicycle parking space for every 10 automobile parking spaces.

h. All zoning lots in effect at the date of this ordinance's adoption are subject to this ordinance for the purpose of determining maximum allowed parking.

i. Property owners are responsible to properly maintain all landscaping, and replace all dead and diseased vegetation.

Section 35- Design Standards

Development in the Transit Oriented Overlay District shall comply with the following design standards:

a. The main entrance of any building shall face the street.

b. The main entrance of any building must provide for easy and convenient access from the sidewalk to the entrance.

c. Any new construction must be built to the building line.

d. In all Business and Commercial zones at least 25% of sidewalk level (or first level) wall area shall be in the form of transparent windows or doors.

Section 35- Structured Parking

Structured parking is an allowable use and is exempt from the maximum number of on-site parking spaces per Section 35-xxx Required Parking and Loading Areas but must follow the following design provisions:

a. Structured parking built to the building line must have retail/office uses on the entire first floor length, except for portion of building used for means of access and egress.

b. Structured parking without retail/office on the first floor must be set back a minimum of thirty feet from the street line. A perimeter, landscaped strip must be provided around the entire structure. The landscaped strip shall contain no fewer

than four trees for every one hundred linear feet, as well as shrubs, a minimum of 4 feet in height.

c. A liner building containing retail/office on the first floor may be constructed in lieu of the landscaped strip at time of construction or at any time in the future.

d. The design and site plan for the structured parking must be submitted to the Design Review Board.

Section 35- Parking facilities, as part of transit station development shall be exempt from Section – Required Parking and Loading Areas.

Ord. Transit Oriented Overlay District 6-23-03
GM

Appendix D: Proposed Zoning – West Hartford

West Hartford Zoning Amendment (Draft)

Changes to the West Hartford zoning also should be considered in order to ensure that, over time, sites are redeveloped for more transit-supportive uses such as office, retail and light industrial with high density employment. The TOD Overlay Zone would encompass the land along the east and west sides of New Park Avenue and along Newfield Avenue within the 1/4 mile radius to the south of the station and to the town boundary to the north of the station.

Transit Oriented Development Overlay Zone (TOD)

The purpose of this overlay zone is to encourage uses that create employment and residential density, and enhance pedestrian activity and the pedestrian environment. The overlay zone is also designed to encourage uses that can be frequented by transit patrons rather than requiring an automobile.

In Transit Oriented Development Overlay Zones, the following use table would apply:

Permitted Main Uses	BG with Overlay Zone	IG with Overlay Zone
1. One-family house, 1 per lot		
2. Places of worship	A	
3. Public, parochial or private school or college	A	
4. Nursery school,	A	
5. Library, museum	A	
6. Religious institution	A	
7. Charitable institutions	A	
8. Public park, recreation facility	A	A
9.Private, nonprofit membership club	A	A
10. Water supply and sewage disposal system & facility	B	B
11. Utility transmission lines and substations	P	P
12. Hospital, nursing and convalescent home		
13. Governmental and municipal use	B	B
14. Farm use		
15. Nurseries and greenhouses	B	B
16. Multifamily dwellings (TO BE DISCUSSED)		
17. Parking of motor vehicles on the ground or within or on a structure	B	
18. Office building for professional use	B	B
19. Office building for general business and professional use	B	B
20. Research laboratories	B	B
21. Bank, including drive-in facilities	B	B
22. Retail business	B	B
23. Establishment performing personal services	B	B
24. Restaurants	B	B
25. Hotel, motel	B	B

26. Funeral home	B	B
27. Cemetery		*
28. Crematorium	*	*
Permitted Main Uses	BG with Overlay Zone	IG with Overlay Zone
29. Outdoor recreation area operated for profit	A	B
30. Theater and other indoor recreation or amusement facility	A	B
31. Telephone exchange, electric substation	B	B
32. Radio and television studio	B	B
33. Radio and television broadcasting	B	B
34. Motor vehicle sales, service and repair, gasoline station	*	*
35. Wholesale business and storage warehouse use	*	*
36. Printing	B	B
37. Any industrial or manufacturing use	D	D
38. Outdoor storage of material and equipment		*
39. Contractor's yard		*
40. Junkyard		*
41. Railroad terminal and yard		*
42. Animal hospital	B	B
43. Kennel	*	*
44. Group care facility		
45. Monuments or statues on public land	C	C
46. Retail firearms stores		B
47. Vehicle-intensive business		*
48. Passenger automobile rental agency	*	*
49. One-family house, 1 per lot on rear lot		
50. Certain professional offices (first floor only)		
51. Adult-oriented establishments		A

KEY

A =	Permitted use subject to issuance of a building and/or zoning permit and subject to 177-42.A
B =	Permitted use subject to issuance of a building and/or zoning permit and subject to 177-42.B
C =	Permitted use subject to approval of Town Council pursuant to 177-42B and subject to 177-42B
D =	Permitted use if meets minimum employment density requirement of XX employees/square foot
P =	Permitted use subject to issuance of a building and/or zoning permit
Not marked =	Not a permitted use in the particular district
* =	Change in allowed use from underlying zoning

Dimensional Standards for TOD Overlay District

	BG with Overlay Zone	IG with Overlay Zone
Minimum Lot Area (sf)	NA	NA
Average Lot Width (sf)	NA	NA
Maximum FAR	1.5*	1.5*
Maximum Lot Coverage (buildings)	Ground coverage may be equal to that area remaining after provisions for yard requirements and parking are met. If parking requirements are met as stipulated under 177-32D or G, the building coverage may be equal to that area remaining after yard requirements are met	50%
For Lots Adjoining Residential Districts		
Front Yard (buildings)	Building Line and Type A Screening Maximum 10' setback	Building Line and Type A Screening Maximum 10' setback
Front Yard (parking areas)	10' plus Type A screening	10' plus Type C screening
Side and Rear Yard (buildings)	Side and rear yards of the main building, where said yards abut a residential district, shall have a width of at least ½ the height of said building, but not less than 15', including Type B screening. Accessory buildings may be erected to within 2 ft. of the lot line if any portion of the wall facing the residence district closer than 15 ft. to said lot line has no openings for windows, doors or mechanical equipment and if said wall is constructed with brick facing.	One of the side yards or the rear yard of the main building shall have the width of at least 1/3 of the height of the said building, but not less than 10 ft., and said yard shall be accessible for fire-fighting purposes. No other side or rear yard is required, but if provided, it shall be at least 4' wide.
Side and Rear Yard (parking areas)	Type C screening	Type C screening
For Lots Adjoining Non-Residential Districts		
Front Yard (buildings)	Building Line Maximum 10' setback	Building Line Maximum 10' setback
Front Yard (parking areas)	NA	NA
Side and Rear Yard (buildings)	One of the side yards or rear yard of the main building shall have width of at least 1/3 of the height of said building, but not less than 10 ft. and said yard shall be accessible fire-fighting purposes. No other side or rear yard is required, but if provided, it shall be at least 4' wide.	One of the side yards or rear yard of the main building shall have width of at least 1/3 of the height of said building, but not less than 10 ft. and said yard shall be accessible fire-fighting purposes. No other side or rear yard is required, but if provided, it shall be at least 4' wide.
Side and Rear Yard (parking areas)	NA	NA
Maximum Height		
Main Building	4 stories/45'	4 stories/45'
Accessory Buildings	1 ½ stories/15 feet	1 ½ stories/15 feet

Parking Requirements by Use

Dwellings for 3 or more families	1 per dwelling unit*
Rooming houses	1 per guest sleeping room
Hotels; motels	1 per guest sleeping room plus restaurant requirement where applicable; meeting and conference rooms other than dining room, 1 per 3 persons of design capacity restaurant requirement*
Retail and personal service stores & banks	5 per 1000 s.f. of gross floor area*
Restaurants	1 per 3 seats
Offices	3 per 1000 s.f. of gross floor area*
Theaters, auditoriums	1 per 3 seats
Places of worship	1 per 6 seats
Industrial uses	1 per 3 employees*

Parking requirements represent minimums. Maximums shall not exceed the minimum requirement by more than 5%.